42. Dr. Vander Weide, however, has focused on the wrong line of business. Here, the relevant line of business is the wholesale provision of network elements to competing local exchange companies. This is a distinctly different, and far less risky business than the overall combined businesses of the publicly-traded Bell Atlantic holding company, or the S&P industrials—and therefore can support a more leveraged (*i.e.*, debt-intensive) capital structure. AT&T-WCOM Exh. 10 (Hirshleifer Reb.) at 33-34.

Because the capital structure of enterprises devoted to the wholesale supply of unbundled network elements is not directly observable, Mr. Hirshleifer appropriately used the midpoint of the book-weighted capital structure and market-weighted capital structure of large local telephone holding companies as a surrogate for the market-weighted capital structure of a firm devoted solely to the wholesale supply of UNEs. AT&T-WCOM Exh. 5 (Hirshleifer Dir.) at 34-42. This approach is a reasonable proxy for the true underlying market-weighted capital structure, which cannot be observed directly. AT&T-WCOM Exh. 10 (Hirshleifer Reb.) at 34-35; AT&T-WCOM Exh. 17 (Hirshleifer Surreb.) at 54-55, 58-59.

Dr. Vander Weide, by contrast, simply adopted without adjustment the market weighted capital structure of the companies in the S&P 400 industrial group. Because these companies are riskier on average, their capital structures contain on average more equity than would be efficient for a wholesale supplier of UNEs. The market-weighted capital structures of local telephone companies are inappropriate for the same reason. AT&T-WCOM Exh. 10 (Hirshleifer Reb.) at 33-35.

9. Independent Cost Of Capital Analyses Provide Further Support For Mr. Hirshleifer's Cost Of Capital Estimate.

The weighted average cost of capital proposed by Mr. Hirshleifer is supported by the recent estimates of independent securities analysts, the recent estimates of securities firms and investment banks retained by Verizon's predecessor companies (Bell Atlantic, NYNEX and

GTE) in their merger prospectuses, and by the three companies themselves in their role as sponsors of those prospectuses. These estimates converge in the range of a weighted average cost of capital of 8 to 11 percent or so for the overall business of local telephony. These estimates are consistent with an even lower cost of capital for the wholesale business of supplying UNEs. AT&T-WCOM Exh. 5 (Hirshleifer Dir.) at 43-47; AT&T-WCOM Exh. 17 (Hirshleifer Surreb.) at 67-68.

Dr. Vander Weide has responded to these estimates by mischaracterizing them, by misstating the cost of capital values assumed in other, similar analyses, by asserting that the investment bankers deliberately assumed inaccurate information, or by countering with cost of capital analyses of interexchange companies and other business with significantly greater business risk. These arguments reveal more about Dr. Vander Weide than about the appropriate cost of capital. *Cf.* Verizon Exh. 112 (Vander Weide Reb.) at 62-71; AT&T-WCOM Exh. 17 (Hirshleifer Surreb.) at 60-72.

Finally, Verizon asserts that the most objective measure of the cost of capital is the value that each company uses in its own investment decisions. Thus, Verizon boasts, it has adopted Dr. Vander Weide's 12.95 percent of capital is the company's actual standard for investment decisions. Moreover, Verizon contends, AT&T used an even higher figure 15.306 percent, in an incremental cost model developed in 1997. *See* Verizon Exh. 112 (Vander Weide Reb.) at 10, 61.

The obvious flaw in the first argument is that Verizon has failed to identify any investment decision that in fact was rejected by application of the 12.95 percent standard. Without such a showing, it is impossible for the Commission to know whether Verizon's "adoption" of the standard was genuine, or was merely a bit of posturing for the Commission's

benefit, designed to create some paper that might enhance the credibility of Dr. Vander Weide's analysis in UNE cases.

Verizon's attempt to seize upon the 15.306 percent hurdle rate used in an internal cost model developed by AT&T in 1997 as evidence of Verizon's true cost of capital for supplying UNEs at wholesale is equally wide of the mark. AT&T does not currently use the model, and the personnel who developed it are no longer with the company. It is apparent, however, that the 15.306 percent figure was intended as a decision tool for investments relating to *long distance* services—a highly competitive commodity business—not the far less risky business of supplying UNEs at wholesale in markets where the incumbent firm retains substantial market dominance. Exh. AT&T-WCOM 17 (Hirshleifer Surreb.) at 72-73; Response of AT&T to Staff Record Requests Concerning AT&T Internal Cost of Capital (filed Dec. 12, 2001).

Far more to the point are the internal cost of capital estimates developed for local exchange carriers by investment analysts, and by one of Verizon's peers, Ameritech, for its own investment decisions. *Those* estimates support a cost of capital in the range of 10 percent or less. Exh. AT&T-WCOM 17 (Hirshleifer Surreb.) at 73-74.

D. Depreciation Lives

Depreciation lives are intended to provide a recovery of the cost of assets that are expected to wear out or become obsolete over time. Shorter depreciation lives mean higher network element rates, because a larger share of the investment in network equipment may be recovered from ratepayers as a depreciation expense each year.

Consistent with the forward-looking nature of TELRIC methodology, the FCC requires that economic depreciation rates be used in calculating the forward-looking economic costs of UNEs. 47 C.F.R. § 51.505(b)(3); AT&T-WCOM Exh. 3 (Lee Dir.) at 3. That, in turn,

requires that the plant lives used must be based on the expected economic lives of newly based plant, or "projection" lives. AT&T-WCOM Exh. 3 (Lee Dir.) at 3-4.

The depreciation lives and net salvage values adopted by the FCC and the Virginia SCC in the FCC's three-way prescription process should be adopted in this proceeding as the best available evidence of Verizon's forward-looking depreciation lives and net salvage values. *Id.* at 4-8. Those values reflect a rigorous application of forward-looking principles by the FCC, including a "detailed analysis of each carrier's most recent retirement patterns, the carriers' plans, and the current technological developments and trends."[96] Reviewing the prescribed life ranges in 1999, the FCC reaffirmed that its lives: (1) "represent the best forward-looking estimates of depreciation lives" and (2) were therefore appropriate for use by state commissions "for determining the appropriate depreciation factors for use in establishing high cost support and interconnection and UNE prices."[97]

The FCC-prescribed lives have been accepted by the Virginia commission,[98] as well as the state commissions of Alabama, Colorado, Delaware, Florida, Georgia, Hawaii, Illinois, Louisiana, Maryland, Massachusetts, Mississippi, Nevada, New Jersey, New York, North Carolina, Ohio, Rhode Island, South Carolina, Tennessee, Texas, West Virginia and

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[96] AT&T/WorldCom Exh. 3 (Lee Dir.) at 5 n. 8 (citing *Simplification of the Depreciation Prescription Process*, CC Docket No. 92-296 ("*Prescription Simplification*"), Third Report and Order, FCC 95-181 (rel. May 4, 1995), at 6).

[97] *See 1998 Biennial Regulatory Review – Review of Depreciation Requirements for Incumbent Local Exchange Carriers*, CC Docket No. 98-137, Report and Order rel. December 30, 1999 (FCC 99-397), ¶ 14; *United States Telephone Associations Petition for Forbearance from Depreciation Regulation of Price Cap Local Exchange Carriers*, ASD 98-91, Memorandum Opinion and Order (FCC 99-397), rel. December 30, 1999, ¶ 61. *See also Federal-State Joint Board on Universal Service*, 12 FCC Rcd. 8776 (1997) ¶ 250 (determining that FCC would use its existing prescribed depreciation lives in calculating universal service subsidies).

[98] Virginia SCC Docket No. PUC970005, *Ex Parte: To Determine prices Bell Atlantic-Virginia, Inc. is authorized to charge Competitive Local Exchange Carriers in accordance with the Telecommunications* Act *of 1996 and Applicable State Law*, Order issued May 22, 1996, at 6.

Wyoming.[99] The growing levels of depreciation reserves throughout the local telephone industry provides empirical confirmation that the FCC lives are forward-looking.[100]

In this proceeding, Verizon proposes the use of depreciation lives that are considerably shorter than the FCC-prescribed lives. *See* AT&T-WCOM Exh. 9 (Lee Reb.) at 1-2 and Attachment 1 (table comparing lives).

Verizon defends the truncated lives it proposes on the grounds that they are: (1) based on the *financial* depreciation lives used by it and other telephone carriers in compliance with Generally Accepted Accounting Principles ("GAAP"); (2) consistent with the depreciation lives assumed by long distance carriers such as AT&T and WCOM in *their* financial reports; (3) longer than the lives recommended by Technology Futures Inc. ("TFI"), a consultant retained by many local exchange carriers in depreciation proceedings; (4) warranted by recent increases in competition and technological change; and (5) required by the theoretical premises of the TELRIC standard. Verizon Exh. 106 (Sovereign Dir.); Verizon Exh. 105 (Lacey Dir.); Verizon Exh. 102 (Gordon Dir.) at 25-28; VZ-VZ Exh. 101 (Shelanski Dir.) at 30-32. None of these justifications withstands scrutiny.

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[99] *See, e.g.,* AT&T-WCOM Exh. 3 (Lee Dir.) at 8-14 (citing cases); Massachusetts DPU 96-73/74, Decision dated December 4, 1996, at 55-56; Delaware PSC Docket 96-324, Interlocutory Order No. 4488 (April 29, 1997), at 3 (adopting depreciation life recommendations of Hearing Examiners), *confirmed*, Findings, Opinion & Order No. 4542 (July 9, 1997); *Commission Order On Arbitration* (W. Va. PSC, Case No. 96-1516-T-PC, issued April 21, 1997), at 43 (adopting FCC depreciation lives for loop feeder and loop distribution and shorter of Hatfield lives, FCC generic ranges or West Virginia PSC lives for other assets, rejecting Bell Atlantic's proposed lives); Order issued April 1, 1997, in NYPSC Case No. 95-C-0657, *et al.*; Maryland PSC Case No. 8731 (Phase II), decision issued September 22, 1997, at 42; Rhode Island PUC Docket No. 2681, *Review of Bell Atlantic-Rhode Island TELRIC Study*, Report and Order (Nov. 18, 2001) (adopting FCC-prescribed lives, not shorter lives proposed by Verizon); New Jersey BPU, Docket No. TO000603056, *I/M/O the Board's Review of Unbundled Network Elements Rates, Terms and Conditions of Bell Atlantic-New Jersey, Inc.*, letter-order at 2 (Nov. 30, 2001) (adopting depreciation lives in mid-point of FCC-prescribed range for Verizon).

[100] AT&T-WCOM Exh. 3 (Lee Dir.) at 5-8. Verizon witness Lacey's assertion that other causes are responsible for the growth in depreciation reserves is unfounded. AT&T-WCOM Exh. 22 (Lee Surreb.) at 4-10.

1. GAAP Financial Accounting Lives Are Not Economic Lives.

The Commission should not adopt "financial accounting lives" here. Financial accounting lives are significantly shorter than the lives prescribed by the FCC, and are an unsuitable proxy for economic lives. Financial accounting lives are biased towards the low (shorter) side because they are driven by corporate objectives, including the objective of protecting shareholders, and by the GAAP principle of conservatism, which encourages the accountant to err on the side of overstating costs for financial reporting when there is uncertainty about their precise level. AT&T-WCOM Exh. 9 (Lee Reb.) at 3-6. As the FCC has noted:

> One of the primary purposes of GAAP is to ensure that a company does not present a misleading picture of its financial condition and operating results by, for example, overstating its asset values or overstating its earnings, which would mislead current and potential investors. GAAP is guided by the conservatism principle which holds, for example, that, when alternative expense amounts are acceptable, the alternative having the least favorable effect on net income should be used. Although conservatism is effective in protecting the interest of investors, it may not always serve the interest of ratepayers. Conservatism could be used under GAAP, for example, to justify additional (but, perhaps not "reasonable") depreciation expense by a LEC to avoid its sharing obligation. Thus, GAAP would not effectively limit the opportunity for LECs to manage earnings so as to avoid the sharing zone as the basic factor range option. In this instance, GAAP does not offer adequate protection for ratepayers.

Prescription Simplification, Report and Order, FCC 93-452, released October 20, 1993, 46.

And it is precisely because of this bias that the FCC expressly *rejected* the use of financial accounting lives for its cost model in its *Universal Service* proceeding two years ago:

> We also agree with GSA's comments that the projected-life values currently used by LECs for financial reporting purposes are inappropriate for use in the model. In addition, the commenters proposing these values have not explained why the values used for financial reporting purposes would also reflect economic depreciation. The depreciation values used in the LECs' financial reporting are intended to protect investors by erring on the side of conservative understatement of net assets, partially achieving this

> goal by erring on the side of over-depreciation. These preferences are not compatible with the accurate estimation of the cost of providing services that are supported by the federal high-cost mechanism. We, therefore, decline to adopt the proposed life values used by LECs for financial reporting purposes.

Federal-State Joint Board on Universal Service and Forward-Looking Mechanism for High Cost Support for Non-Rural LECs, Tenth Report and Order, 14 FCC Rcd. 20156 (1999), ¶ 429 (emphasis added; footnote omitted); *accord*, *1998 Biennial Regulatory Review—Review of Depreciation Requirements for Incumbent Local Exchange Carriers*, CC Docket No. 98-137 (rel. Dec. 30, 1999) at ¶ 48 ("although conservatism is effective in protecting the interests of investors, it may not always serve the interests of ratepayers"); *Shalala v. Guernsey Memorial Hospital*, 115 S.Ct. 1232, 1239 (1995) ("financial accounting has as its foundation the principle of conservatism, with its corollary that 'possible errors in measurement [should] be in the direction of understatement rather than overstatement of net income and net assets . . . This orientation may be consistent with the objectives of informing investors, but it ill-serves the needs of Medicare reimbursement and its mandate to avoid cross-subsidization.").

The supposed demise of conservatism proclaimed by Verizon in its surrebuttal testimony, Verizon Exh. 119 (Lacey Surreb.), is unsupported by the record. According to Professor Lacey's prefiled surrebuttal testimony, the GAAP language relied on by AT&T-WorldCom's depreciation witness, Richard Lee, was "rescinded" in 1993, when Statement of Position 93-3 of the Accounting Standards Executive Committee, "Rescission of Accounting Principles Board Statements" (Verizon Exh. 132 at 5) repealed paragraph 171 of "Accounting Principles Board Statement 4, Basic Concepts and Accounting Principles Underlying Financial Statements of Business Enterprises" ("APB Statement 4") (Verizon Exh. 131 at ¶ 171). Verizon Exh. 119 (Lacey Surreb.) at 4-5; *accord*, 11 Tr. 3307 ("new guidelines were written that no longer include conservatism in the hierarchy of accounting qualities").

Prof. Lacey neglected to mention, however, that APB Statement No. 4 did *not* repeal APB Concepts Statements No. 2 ¶ 91 *et seq.* ("Conservatism"). *See* Verizon Exh. 132 (APB Statement No. 4) at 13 ¶ B-8. Because "the Concepts Statements stand on their own, superseding APB Statement No. 4 has *no impact on financial reporting.*" *Id.* (emphasis added).

APB Concepts Statements No. 2 ¶ 91 *et seq.* ("Conservatism"), as their title suggests, provide a detailed exposition of the currently operative principle of conservatism. Of particular relevance is the following portion of ¶ 95:

> Conservatism is a prudent reaction to uncertainty to try to ensure that uncertainties and risks inherent in business situations are adequately considered. *Thus, if two estimates of amounts to be received or paid in the future are about equally likely, conservatism dictates using the less optimistic estimate*; however, if two amounts are not equally likely, conservatism does not necessarily dictate using the more pessimistic amount rather than the more likely one.

APB Concepts Statements No. 2 ¶ 95 (reproduced in Verizon Exh. 133 at 1042 and AT&T Exh. 106 at 40) (emphasis added).

Confronted with these facts on cross-examination, Professor Lacey conceded that this provision represents "current accounting standards." Tr. 3314. He maintained, however, that the conservatism principle has been reduced to a tie-breaker comparable to a "coin flip," used only when we are "completely unsure" and have "no idea" what the correct value is. *Id.* at 3317-18. In his view, a decision maker would have too much information to invoke conservatism even if the standard deviation from the expected value of a depreciation life was *as large as the expected value itself. Id.* at 3319-20 (emphasis added). Indeed, the conservatism principle should not be applied "*no matter how large* the uncertainty is in relation to the expected value." *Id.* at 3322 (emphasis added).

Professor Lacey's cramped interpretation of the conservatism principle would effectively read it out of existence. It is difficult to imagine any accounting item that is more difficult to quantify with precision than the expected economic life of a class of assets. As the Financial Accounting Standards Board has explained:

> Some accounting measurements are more easily verified than others. Alternative measures of cash will be closely clustered together, with a consequently high level of verifiability. There will be less unanimity about receivables (especially their net value), still less about inventories, and *least about depreciable assets, for there will be disagreements about depreciation methods to be used, predictions about asset lives*, and (if book values are based on historical cost) even which expenditures should be included in the investment base. *More than one empirical investigation has concluded that accountants may agree more about estimates of the market values of certain depreciable assets than about their carrying values*. Hence, to the extent that verification depends on consensus, it may not always be those measurement methods widely regarded as "objective" that are most verifiable.

FASB, Statement of Financial Accounting Concepts No. 2, *Qualitative Characteristics of Accounting Information* (May 1980) ¶ 85 (reproduced in AT&T Exh. 106 at 35-36). *Accord*, Verizon Exh. AT&T-WCOM Exh. 9 (Lee Reb.) at 4 ("Most accountants would agree that the very nature of depreciation makes it a challenge to measure."); *see also* Tr. 3153 (Shelanski) ("There are many things about which one is uncertain. Demand conditions over time and the pace of technological change."). If the GAAP principle of conservatism does not apply to depreciation lives, it applies nowhere.[101]

[101] Professor Lacey's failure to acknowledge the uncertainties inherent in estimating regulatory depreciation lives may simply betray his unfamiliarity with the subject. Before this case, he had never submitted testimony in any proceeding before the FCC or a state commission concerning the regulation of telephone companies, and had never heard of the FCC's three-way meetings. 11 Tr. 3303-04. He conceded that he was not a member of the Society of Depreciation Professionals, and did not consider himself an expert on telephone company regulation. *Id.* at 3304.

Nothing in the GAAP pronouncements cited by Professor Lacey suggests that the accounting profession intended to nullify the conservatism principle in this way. In any event, there certainly is no ground for assuming that the opinions of theoreticians like Professor Lacey on this issue reflect the actual practices of corporate accountants and their outside auditors in the field. The FASB itself has noted that the adherence of accounting practitioners to a highly aggressive form of conservatism is deeply ingrained:

> conservatism has long been identified with the idea that deliberate understatement [of net assets and profits] is a virtue. *That notion became deeply ingrained and is still in evidence despite efforts over the past 40 years to change it.*

Verizon Exh. 133 (FASB *Original Pronouncements*, Concepts Statements No. 2 ¶ 93. *See also 1998 Biennial Regulatory Review, supra*, at ¶ 48 ("we are not persuaded that the role of the conservatism principle in GAAP has changed").

2. The Financial Lives Of Other Telecommunications Carriers Are Unsuitable Proxies For Verizon's Economic Lives.

The foregoing analysis also disposes of Verizon's attempt to justify its proposed depreciation lives by invoking the lives used by firms such as AT&T, WorldCom, and cable TV carriers in *their* financial reports to shareholders. Verizon Exh. 105 (Lacey Dir.) at 14; Verizon Exh. 106 (Sovereign Dir.) at 12-15. The depreciation lives used in the financial reports of these companies, like the financial lives of Verizon, are GAAP lives, and thus subject to a conservative bias as well. They may effectively protect investors, but they are ill designed to protect ratepayers. AT&T-WCOM Exh. 9 (Lee Reb.) at 6-7. In any event, the FCC has specifically found that "the depreciation practices of IXCs and incumbent LECs are not directly comparable because they use different types of switches and cables." *1998 Biennial Regulatory Review, supra*, at ¶ 18 (footnotes omitted).

3. The TFI Recommendations Have Been Discredited.

That the 1999 GAAP lives proposed by Verizon here are longer than the extraordinarily short lives proposed by Technology Forecasting Group ("TFI") and its president, Dr. Lawrence K. Vanston, is no reason to adopt the GAAP lives. *Cf.* Verizon Exh. 106 (Sovereign Dir.) at 15-16. The radically truncated depreciation lives proposed by Dr. Vanston in 1996-97 were utterly unsupported by the record. They assumed, without foundation, that the advent of broadband services would lead to an "avalanche" of retirements of copper cable as fiber displaced copper. The historical record since the mid-1990s has not been kind to the TFI predictions, which overlooked (among other things) the advent of DSL technology for providing broadband service over copper cables. AT&T-WCOM Exh. 9 (Lee Reb.) at 9-12. Unsurprisingly, the TFI/Vanston lives have been rejected in almost every state UNE proceeding where they have been proposed, as well as by the FCC itself:

> Given the significant uncertainty that even TFI acknowledges exists in forecasting plant replacement over the next fifteen years, we do not find that the carriers that advocate adoption of TFI's much shorter projection lives have met their burden. Depreciation reserves are at 52 percent, an all-time high, and have increased for each of the past five years. There is no evidence that the large wave of plant replacements forecast by TFI, which should result in increased retirements, has begun or is about to begin.
>
> * * *
>
> We conclude, therefore, that the TFI study fails to establish convincingly that current projection lives are inadequate.

1998 Biennial Regulatory Review-Review of Depreciation Requirements for Incumbent Local Exchange Carriers, CC Docket 98-137, Report and Order, FCC 99-397, released December 30, 1999 ("*1999 Update*"), ¶ 16 (footnotes deleted). *Accord, Bell Atlantic-Delaware*, 80 F. Supp.2d at pp. 241-42 (upholding rejection of TFI lives in UNE case).

4. Verizon Has Failed To Establish That Recent Changes In Technology And Competition Warrant Lives Shorter Than The FCC-Prescribed Lives.

Verizon once again renews the ILECs' perennial claim that FCC-prescribed lives are not forward-looking because they fail to reflect the current and expected rate of innovation and level of competition in the local telephone industry. Verizon Exh. 106 (Sovereign Dir.) at 6-8. As the Commission has repeatedly ruled in rejecting this kind of claim, however, it cannot be credited without evidence that the existing FCC-prescribed lives are in fact longer than warranted by the expected economic lives of the assets.

Like the LECs in the *Universal Service* proceeding, *supra*, Verizon has made no showing the FCC-prescribed lives are too long, or that economic lives for most telephone equipment are decreasing. Nor could Verizon make such a showing. The FCC-approved lives have reflected the life-shortening effects of facilities bypass, or potential competition, for many years. AT&T-WCOM Exh. 9 (Lee Reb.) at 14. If the 1996 Act has had any effect on economic lives, the effect has been to create *alternatives* to facilities-based bypass—i.e., the purchase of unbundled UNEs or the resale of wholesale services—that tend to *lengthen* the economic lives of ILEC assets. *Id.* at 14. Likewise, the advent of DSL exemplifies the ability of innovation to lengthen the lives of existing assets. *Id.* at 9, 12. And Verizon never offers a convincing explanation for the nationwide buildup of ILEC depreciation reserves in recent years. *Id.* at 12-13; AT&T-WCOM Exh. 3 (Lee Dir.) at 5-8.

The contention of Verizon rebuttal witnesses Hausman and Shelanski that FCC-prescribed lives fail to account for economic depreciation caused by the change in the prices of capital goods used in telecommunications is also unsupported. Because the FCC lives are "economic" lives, they take into account expected changes in the price of capital goods, to the extent that these changes can be expected to affect the economic life of the assets in question. AT&T-WCOM Exh. 22 (Lee Surreb.) at 11.

Verizon's contention that the FCC has prescribed shorter lives in certain *other* states gains Verizon nothing. *Cf.* Verizon Exh. 114 (Sovereign Reb.) at 8. Verizon has chosen not to file for new FCC prescriptions for Virginia. Hence, Verizon's assumption that a new prescription proceeding would have resulted in shorter lives is purely speculative. AT&T-WCOM Exh. 22 (Lee Surreb.) at 3.[102]

Finally, Mr. Sovereign's suggestion that many states have chosen in UNE pricing proceedings to use lives significantly shorter than those prescribed by the FCC is both untrue and irrelevant. *Cf.* VZ-VZ Exh. 106 (Sovereign Dir.) at 19-20; Verizon Exh. 114 (Sovereign Reb.) at 11-13. In the overwhelming majority of recent UNE decisions, the states adopted lives that were equal to, similar to, or longer than the FCC-prescribed lives. AT&T-WCOM Exh. 3 (Lee Dir.) at 9-13 (citing 21 states that have adopted such lives); AT&T-WCOM Exh. 22 (Lee Surreb.) at 4.

Moreover, the decisions of the handful of states that have adopted shorter lives are not determinative. "Some state commission were implementing state laws which required them to deregulated depreciation. Other state commissions have allowed carriers to select shorter depreciation lives as part of a 'social contract' that included promises by the carriers not to raise rates for specified periods." *1998 Biennial Regulatory Review*, *supra*, at ¶ 17 (footnotes

[102] Verizon asserts that it had no reason to seek represcription of its depreciation lives because its rates were no longer set under a cost-of-service standard. But Verizon still has had a clear economic interest in obtaining shorter regulatory depreciation lives. The FCC lives underlie Verizon's ARMIS reports, the interstate rate of return reported on FCC Form 492-A, and the level of Verizon's price cap. Tr. 3293-95 (Sovereign). Depreciation lives thus operate as a binding constraint on the ILECs' rates, for the FCC's depreciation prescription process has "constrained incumbent LECs' ability to reduce their reported earnings below the low-end adjustment trigger by increasing their depreciation expenses artificially." *1998 Biennial Regulatory Review*, *supra*, at ¶ 47. Moreover, Verizon has known for at least five years that its FCC-prescribed depreciation lives could affect its TELRIC costs and UNE prices under the 1996 Act. Hence, Verizon's failure to seek represcription of its Virginia lives in 1996 or 1999 may legitimately be taken as an admission that no change in the existing lives was warranted.

omitted). The FCC's decision here is governed by the 1996 Act and the *Local Competition Order*, not the laws of other states that were enacted for other regulatory purposes.

5. The FCC-Prescribed Lives Are Consistent With The Theoretical Premises Of TELRIC.

Verizon's final contention is that the theoretical premises of TELRIC—in particular, the assumption of "instantaneous" entry of competitors and reconfiguration of networks—imply an extraordinarily rapid turnover of assets, and therefore require the Commission to assume that depreciation lives will be very short. Verizon Exh. 105 (Lacey Dir.) at 8 (claiming that, if the depreciation study period is three years, the depreciation life must be three years). As with the definition of a TELRIC-consistent cost of capital, Verizon engages in caricature, not analysis.

The assumption of "instantaneous" entry and asset reconfiguration does not imply instantaneous entry or network reconfiguration will literally occur. Rather, the assumption is a shorthand for the Commission's goal of replicating the *performance* of markets in which prices are disciplined by the *threat* of such entry—i.e., markets that are effectively competitive or contestable. *See* Section II.A, *supra*. In such markets, the advent of newer, better technology will promptly induce a downward revaluation of existing assets that embody embedded technology to bring their prices in line with their reduced economic value going forward, *even if the embedded assets remain in service. See id.*

The frequent (or even continual) revaluation of existing assets in competitive markets, however, does not necessarily imply short depreciation lives or rapid declines in asset values. Even atomistically competitive markets, firms may use assets with long depreciation lives if the technology is sufficiently mature (farming is a good example). What controls the life of the assets is not the intensity of the competition, but the pace of the technological change. Because the FCC-prescribed depreciation lives for Verizon already reflect the expected rate of

technological change, the competitive assumptions of the TELRIC paradigm require no alteration of those lives.

E. Cost Factors

1. Expense Factors

The Synthesis Model calculates expenses using the methodology set forth in the FCC's version of the Model, with the modifications described in AT&T/Worldcom witness Brian Pitkin's testimony AT&T/WCOM Exh. 1 (Pitkin Dir.) at 12-17. Nationwide values are used where the FCC has determined those best reflect forward-looking expenses, and Virginia-specific expenses are applied where appropriate. Many expenses will decrease significantly in a forward-looking network, but it is difficult to calculate those expenses on a bottoms-up basis. Recognizing this problem, the Synthesis Model uses expense-to-investment ratios to calculate forward-looking expenses.

In contrast, Verizon relies on its expenses in Virginia in a single year – 1999 – and raises those expenses to 2001 levels through labor productivity and inflation adjustments. Verizon reviews, and to some degree removes, retail-related expenses but makes almost no adjustments to account for reductions in expenses in a forward-looking network. Verizon also makes no effort to determine if its 1999 expenses are representative.

a. Expenses in the Synthesis Model

Verizon presents few criticisms of the expense calculations in the Synthesis Model and does not offer an alternative methodology or present alternative inputs. Because Verizon did not restate expenses, AT&T and WorldCom are left to respond to Verizon's broad and unsubstantiated assertions about expenses in the Model.

(1) Corporate Overhead Cost Factor

The Synthesis Model applies an extremely conservative 8% factor to forward-looking costs to develop total corporate overhead expenses. The data show a downward trend in corporate overhead expenses for all RBOCs from 1995 to 2000; nonetheless, AT&T and WorldCom used 2000 figures, rather than projecting a continuation of this declining trend forward. AT&T/WCOM Exh. 1 (Pitkin Dir.) at 12-13; AT&T/WCOM Exh. 14P (Pitkin Surreb.) at 63. In addition, these data include retail expenses, thus overstating expenses associated with UNEs. *Id.* at 64.

The 2000 data also includes significant expenses related to Verizon's mergers. *Id.* at 64-65. In the future, corporate overhead will likely be lower both because the merger-expenses will cease and because merger savings will be realized. As described below in the discussion of the Verizon studies, Verizon has acknowledged that those merger savings are likely to be extensive. As confirmation of the conservative nature of this 8% corporate overhead figure, Verizon uses an almost identical corporate overhead figure in its cost study. *Id.*; AT&T/WCOM Exh. 15 (Baranowski Surreb.) at 11-12.

Verizon criticizes the use of a ratio to estimate forward-looking overhead expenses but does not suggest an alternative approach. The use of such a ratio is a generous approach used by commissions in the past. AT&T/WCOM Exh. 1 (Pitkin Dir.) at 12-13.

(2) Network Operations Expenses

The Synthesis Model bases network operations expenses on Verizon's actual year 2000 expenses, AT&T/WCOM Exh. 14 (Pitkin Surreb.) at 67, and then adjusts those expenses to 2002 using a linear regression showing the trend in network operations expenses in Verizon's network from 1994 to 2000. Based on this method, the network operations expenses in the

Synthesis Model are projected to be 4% lower in 2002 than the total 2000 network operations expenses in Verizon Virginia's network.

Network expenses were falling until 2000 and rose significantly that year. Given the spike in 2000 expenses, use of 2000 as the base year likely overstates expenses. *Id.* Indeed, network operation expenses as determined by the Synthesis Model for 2002 are 9% *higher* than Verizon Virginia's 1999 expenses. Moreover, network operations expenses would likely be significantly lower in a forward-looking network because of more efficient network design and more sophisticated technology. AT&T/WCOM Exh. 18 (Riolo Surreb.) at 11-12.[103]

The Synthesis Model allocates network operations expenses to elements and services on a DS-0 equivalent basis. AT&T/WCOM Exh. 18 (Pitkin Sureb.) at 66-67. In justifying allocation of overhead expenses on a DS-0 equivalent basis, the Commission explained that "it is reasonable to assume that more overhead expenses are devoted to winning and keeping the DS1 customer than the residential customer. Further, we expect that more overhead expenses are related to customers using higher capacity services than those using lower capacity services. Accordingly, we find that it is reasonable to use channel counts in our regression equations." Universal Service Tenth Order at 393.

Verizon argues that the Synthesis Model omits a portion of network operations expenses during the allocation of expenses to individual elements. Verizon Exh. 108 (Tardiff Reb.) at 61; Verizon Exh. 162 (Tardiff Supp. Surreb.) at 17-18. In response, AT&T and WorldCom adjusted the Synthesis Model in their surrebuttal testimony to flow through the six percent of expenses that had not been allocated appropriately to UNEs, AT&T/WCOM Exh. 14

[103] Although Verizon criticizes the Synthesis Model for use of estimated 2002 network operations expenses, these numbers are calculated on a per-line basis and should reflect the average over the time period in which the rates are likely to be in effect. In addition, the 2002 estimate is only 1% different from the actual 2000 expenses.

(Pitkin Surreb.) 66, 72, and demonstrated that the expenses flow through properly. Tr. 5545 (Pitkin).

(3) Marketing

In calculating UNE costs, AT&T and WorldCom have excluded marketing costs from their calculation of expenses. These costs are associated with retail marketing and should not be included in a study aimed at calculating UNE costs. Contrary to Verizon's assertion, Verizon Exh.109 (Murphy Reb.) at 69, few if any marketing costs are associated with wholesale customers. AT&T/WCOM Exh. 16 (Pitkin Surreb.) at 68-69. Indeed, Verizon's own resale cost study excluded nearly *** **BEGIN VERIZON PROPRIETARY** *** **END VERIZON PROPRIETARY** of overall marketing expenses as being attributable to retail functions. Moreover, the remaining expenses were clearly excessive. For example, Verizon included 100% of product advertising expenses in its study even though advertising is not needed to provide UNEs. AT&T/WCOM Exh. 14 (Pitkin Surreb.) at 69.

When the FCC developed the FCC Synthesis Model for universal service (which is a retail service offering), it eliminated 94% of marketing expenses. Universal Service Tenth Order ¶ 407. Based on Verizon's account for marketing expenses, AT&T and WorldCom determined that even the small amount of marketing expenses retained by the FCC for retail universal service costing purposes should be eliminated for purposes of calculating wholesale UNE costs. AT&T/WCOM Exh. 14 (Pitkin Surreb.) at 69. In Verizon's marketing account, almost no marketing expenses were associated with the provision of UNEs. Tr. 3863 (Pitkin). In rebuttal, Verizon did not propose any specific adjustment to the Synthesis Model and thus AT&T and WorldCom had no basis to respond on surrebuttal.

(4) Customer Service Expenses

The Synthesis Model relies on a figure of $1.69 per line per year for customer service expenses, such as expenses to answer billing inquiries from CLECs. AT&T and WorldCom eliminated retail-related customer service expenses from the Model but added $1.69 for wholesale expenses. This figure is similar to Verizon's own assumption regarding these expenses in its own studies. AT&T/WCOM Exh. 14 (Pitkin Surreb.) at 70.

(5) General Support Expenses

The Synthesis Model calculates general support expenses in the same manner as the FCC's universal service calculation and thus excludes expenses related to special access and toll services. Verizon argues that expenses related to special access and toll services should be included in UNE calculations, Verizon Exh. 108 (Tardiff Reb.) at 59-60, Verizon Exh. 109 (Murphy Reb.) at 113. In reality, fewer general support expenses should be included in calculating UNE costs than in calculating costs for USF purposes. Provision of retail services requires extensive customer support that in turn requires buildings, land and furniture for customer support representatives, as well as complex general purpose computers. Provision of wholesale services requires far fewer customer service representatives and thus far fewer general support expenses. AT&T/WCOM Exh. 14 (Pitkin Surreb.) at 71. Hence, a far higher proportion of general support expenses should be excluded in calculating UNE costs than in calculating costs for USF purposes. AT&T and WorldCom acted conservatively in not increasing the amount of general support expenses excluded by the Commission in the USF context. Indeed, Verizon excludes even more general support expenses in its studies than are excluded in the Synthesis Model. *Id.*

(6) Maintenance Factor

A forward-looking network would have vastly lower maintenance costs as a result of the use of all new equipment and a technology mix that substantially increased use of fiber. Verizon nonetheless claims that there is no reason to presume that maintenance expenses will decrease proportionately with investment. Verizon Exh. 108 (Tardiff Reb.) at 56. Verizon's position is baseless. The Commission specifically concluded that "the model's forward-looking expense estimates should not reflect the cost of maintaining the incumbent LEC's embedded plant" and therefore adopted the use of expense-to-investment ratios. *Universal Service Tenth Order* ¶ 351. This assumption concerning the forward-looking network used to provide universal service is equally applicable to the forward-looking network used to provide UNEs.

Verizon nowhere denies that fiber will be far less expensive to maintain than copper, that new copper will be less expensive to maintain than existing copper, that new DLC equipment will be less expensive to maintain than existing equipment, and so forth. Tr. 3896, 3898 (Riolo) (describing decrease in expenses associated with GR-303 Next Generation Digital Loop Carrier). Verizon also does not suggest any approach for reflecting these savings in the Synthesis Model other than use of expense-to-investment ratios.

(7) Nationwide Values

Verizon criticizes the Synthesis Model's use of nationwide values for various expense calculations without specifying any particular items. Verizon Exh. 108 (Tardiff Reb.) at 57; Verizon Exh. 109 (Murphy Reb.) at 79. AT&T and WorldCom examined the nationwide values used as inputs in the universal service provisioning and adjusted those values based on Virginia-specific data where appropriate. Many expenses do not vary from state to state or region-to-region, and in those cases, nationwide values are entirely appropriate. AT&T and WorldCom generally used nationwide values as inputs because they are "better predictors of . . .

forward-looking costs." *Universal Service Tenth Order* ¶¶ 31, 342, 348, 358, 360, and more accurately reflect the costs that an efficient carrier would incur on a forward-looking basis. Moreover, in many instances, use of nationwide values is conservative because Verizon as a very large ILEC likely has greater economies of scale than many ILECs included in the nationwide data.

The use of nationwide values also generally avoids the need to verify the reasonableness of each company's data. *Universal Service Tenth Order* ¶ 356. Although this concern is somewhat less relevant in a UNE proceeding, it is still extremely difficult to audit the embedded costs of an individual ILEC and determine whether those costs were reasonably incurred and are appropriate forward-looking costs

b. Expenses in Verizon's Models

Verizon's expense calculations are based entirely on its 1999 expenses. Verizon conducted no examination to determine if its 1999 expenses were representative, Tr. 3871-73 (Minion), and proposed almost no adjustments to make its expenses forward-looking. Verizon simply adjusted its embedded 1999 expenses to 2001 levels using various factors. To the extent possible given the limitations of Verizon's approach, AT&T and WorldCom have restated Verizon's 1999 expenses to make them forward-looking.

(1) Verizon Productivity and Inflation Factors and FLC Factor

Verizon agrees with AT&T and WorldCom that expenses can be expected to decrease in a forward-looking network. Tr. 3767. But Verizon's models fail to account for this expected reduction. Verizon states that "if it were the case that Verizon VA used its actual incurred expenses in calculating its ACFs, rather than expenses that have been adjusted to be forward-looking, the resulting ACFs could possibly overstate expenses." Verizon Exh. 122 (Verizon Recurring Cost Panel Surreb.) at 21. That is exactly what Verizon does. The *only*

forward-looking reduction in expenses in Verizon's models is a 5% reduction for repair of copper cable. Tr. 3809 (Minion) (agreeing that 5% adjustment applies only to copper cable repair). Verizon makes no forward-looking adjustment to account for the efficiencies from the pressures of competition and no adjustment to account for the expense reduction from increased use of IDLC in general, and GR-303 in particular. *See* Tr. 3896, 3898 (Riolo) (describing decrease in expenses associated with GR-303 Next Generation Digital Loop Carrier). Furthermore, Verizon makes no adjustment for any reduction in maintenance expenses from replacing outdated equipment. Tr. 3796-3801 (Minion). Verizon simply uses its embedded expenses adjusted from 1999 to 2001. AT&T/WCOM Exh. 17 (Murray Reb.) at 36 ("Verizon applies an adjustment based on a simple presumption that forward-looking expenses will be identical to current expenses.")

Verizon's failure to recognize any savings in maintenance expenses in a forward-looking environment is a serious omission. In this regard, Verizon concedes that it has conducted no analysis of efficiency gains associated with the installation of new DLC equipment in the forward-looking environment. Remarkably, Verizon assumes that the installation of such new equipment would not result in any reductions to the historical levels of its maintenance expenses. *See* Tr. 3796-3797 (Minion). Verizon's assumption is erroneous.

The installation of next generation DLC equipment in a forward-looking network will generate substantial opportunities for reductions in maintenance expenses. Tr. 3894-3896, 3898 (Riolo). Verizon's embedded network includes DLC equipment that was developed with "1970s and 1980s technology." Tr. 3896 (Riolo). Because this vintage digital loop carrier technology does not have software controls, field dispatches are required to test and provision lines. Tr. 3894-96 (Riolo). However, the installation of next generation digital loop carrier

equipment which is software-controlled will enable Verizon to test and provision lines remotely and eliminate the costs associated with field dispatches. Tr. 3896-3898 (Riolo).

Although Verizon claimed in its surrebuttal that it made a forward-looking adjustment for expected productivity gains in a forward-looking network, Verizon Exh. 122 (Verizon Recurring Cost Panel Surreb.) at 21-22, Verizon was forced to admit during the hearing that the productivity adjustment was based on labor productivity gains that have occurred in its existing network, not gains it would expect to occur in a forward-looking network. WorldCom Ex. 108; Tr. 3793, 3795 (Minion) (agreeing that the adjustment Verizon makes for productivity is based on the productivity gains it experiences in its embedded network from year to year).[104] As Mr. Minion acknowledged, "[t]he productivity reflected here reflects the actual achievable expected productivity gains for the network that truly will be in place in the future over the planning period, and it's not trying to approximate or not designed to approximate any productivity gain of a hypothetical theoretical construct, which is not going to be built." Tr. 3795-96 (Minion).

Even if use of embedded productivity gains were appropriate – which it is not – Verizon has failed to demonstrate that its limited productivity adjustment is sufficient. Verizon has not provided any back-up data to show historic productivity and has no time and motion studies that calculate the productivity adjustment or disaggregate the expected productivity gains for workers from different types of plant. Tr. 3907-08 (Minion). Moreover, Verizon calculates productivity gains for labor productivity only, not for total factor productivity. Tr. 3880 (Minion).

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[104] Verizon also eliminated retail-related expenses from its 1999 expenses. Verizon claimed on surrebuttal that this was a forward-looking adjustment, Verizon Exh. 122 (Verizon Recurring Cost Panel Surreb.) at 21, but it admitted during the hearings that this is not a forward-looking adjustment. Tr. 3782-83 (Minion). Moreover, in ostensibly removing retail-related costs, Verizon did not remove all potentially avoidable costs in the long run. Tr. 3812-13 (Minion).

Indeed, Verizon's labor productivity adjustment is so small that it is more than offset by a second adjustment – an adjustment for labor inflation. Those adjustments in 2001 in Verizon's models are approximately the same as those in 1999, and expenses in 2003 are actually higher than in 2001. WorldCom Exh. 107 (lines 61 and 64); Tr. 3794-95, 3802-03 (Minion).[105] In contrast, during the cost proceedings in New York, Verizon proposed a productivity adjustment of 2% above inflation for network-related expenses and 10% above inflation for non-network-related expenses, and Judge Linsider ultimately recommended an adjustment of 3% above inflation for network expenses and 12% above inflation for non-network expenses. Tr. 3804-05 (Minion). *Cf. Universal Service Tenth Order* ¶383 (adopting a productivity factor of 6.0% for 1997 and 1998 for common support services expenses). In Virginia, Verizon proposes a much smaller adjustment – certainly not one that accounts for productivity gains that will occur in a forward-looking network.

As part of its expense calculations, Verizon takes the "forward-looking" expenses it has derived by adjusting 1999 expenses to 2001 levels and divides these expenses by its embedded investments as of 1999. AT&T/WCOM Exh. 12 (AT&T/WorldCom Recurring Cost Panel Reb.) at 85-86. Verizon then divides this expense-to-investment ratio by a Forward Looking Conversion or "FLC" factor based on the ratio of forward-looking to embedded

[105] While Verizon's Model documentation shows how 2002 expenses are calculated from 2001 expenses, it does not show how 2001 expenses are calculated from 1999 expenses. Indeed, the 2001 expenses are almost identical to 1999 expenses. During the hearing, Verizon indicated that it used the same process to adjust 1999 expenses to 2001 expenses as it used to adjust 2001 to 2002 expenses. Tr. 3786-89, 3801-02 (Minion). The documentation shows how this process works. For example, Verizon calculates the maintenance expense for poles in 2002 by multiplying expense for poles in 2001 by an index of labor cost inflation and an index of labor productivity. WorldCom Ex. 106, line 26, applying indices found in WorldCom Ex. 107 at lines 58 and 61. Line 60 of WorldCom Exhibit 107 shows the productivity adjustment from 2001 to 2002 and 2002 to 2003. Use of this process to adjust 1999 levels to 2001 levels yields 2001 values that are almost identical to the 1999 values because the labor productivity and labor inflation adjustments made by Verizon almost exactly cancel each other out.

investments. Verizon's application of a FLC factor means that whatever expenses are input into the numerator of the initial expense-to-investment ratio are the expenses that Verizon ultimately claims to be TELRIC expenses. WorldCom Exh. 105; Tr. 3777-79, 3781 (Minion) (agreeing that it is "absolutely correct" that the expense put into the numerator of the equation is what comes out of the equation). Verizon's use of an expense-to-investment ratio and FLC factor essentially cancel out,[106] leaving Verizon's 1999 expenses with the productivity and inflation adjustments discussed above as Verizon's claimed TELRIC expenses. There is nothing forward-looking about this process.

Because Verizon fails to calculate forward-looking expenses from the bottom up and adjust expenses appropriately, AT&T and WorldCom have restated expenses in Verizon's studies by taking a ratio of 1999 expenses to investments and applying that to forward-looking investments to arrive at forward-looking expenses. By calculating an existing expense-to-investment ratio and assuming this ratio will be constant in a forward-looking network, forward-looking expenses can be calculated once forward-looking investments are known. This approach is used because of the difficulty of making an independent assessment of forward-looking expenses.

AT&T and WorldCom have performed this calculation by removing the FLC factor from Verizon's expense calculations so that forward-looking-expenses can be determined based on forward-looking-investments. AT&T and WorldCom also adjusted the embedded investments to 1999 levels using Current Cost to Booked Cost ("CC/BC") ratios.[107]

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[106] They do not exactly cancel out because Verizon estimates the FLC factor ahead of time based on a projection of what it expects the Commission will determine are TELRIC investments.

[107] Verizon conceptually does not disagree with the application of CC/BC ratios, and AT&T and WorldCom have explained their importance. AT&T/WCOM Exh. 12 (AT&T/WorldCom Recurring Cost Panel Reb.) at 85-86. *See also Universal Service Tenth Order* ¶ 371 (describing importance of CC/BC ratio). In fact, Verizon used CC/BC ratios and no FLC in its first UNE cost study submitted before the Virginia State Corporation Commission. However, Verizon